

Supplementary Table 9. Evidence table of 16 randomized controlled trials which were included in the meta-analysis of regimens for salvage therapy

No.	Study	No. of subjects	No. of intervention	No. of comparator	Results	Conclusion
383	Kuo et al. (2009) [175]	Dyspepsia, failed 1st-line standard triple (166)	EAL (83)	EBTM (83)	ITT: EBTM, 63.9% (95% CI, 53.6–74.2) vs. EAL, 69.9% (95% CI, 60.1–79.7) ($p = 0.89$) PP: EBTM, 84.1% (95% CI, 75.1–93.1) vs. EAL, 75.3% (95% CI, 65.8–84.8) ($p = 0.82$)	The EAL regimen can achieve an efficacy similar to that of the standard EBTM therapy.
316	Wu et al. (2011) [167]	Failed 1st-line standard triple (120)	EBTA (58)	EBTM (62)	ITT: EBTA, 62% (95% CI, 50–75) vs. EBTM, 81% (95% CI, 71–91) ($p = 0.02$) PP: EBTA, 64% (95% CI, 52–76) vs. EBTM, 83% (95% CI, 74–92) ($p = 0.01$)	EBTA quadruple therapy demonstrated a lower eradication rate than standard EBTM therapy in second-line rescue treatment.
266	Chuah et al. (2012) [165]	Peptic ulcer or gastritis, failed 1st-line standard triple (101)	LAE (51)	EMBT (50)	ITT: LAE, 86.3% (95% CI, 76.5–96.1) vs. EBTM, 86% (95% CI, 76–96) ($p > 0.05$) PP: LAE, 93.6% (95% CI, 86–99.8) vs. EAL, 91.8% (95% CI, 83.2–98.5) ($p > 0.05$)	A 14D levofloxacin/amoxicillin/esomeprazole triple therapy approach provides a > 90% per-protocol report.
432	Uygun et al. (2008) [179]	Non-ulcer dyspepsia, failed 1st-line standard triple 14D (278)	LBMA (91) LBTA (92)	LBMT (95)	ITT: LBMA, 68% vs. LBTA, 75% vs. LBMT, 78% PP: LBMA, 74.7% vs. LBTA, 81.5% vs. LBMT, 82.1% ($p > 0.05$)	A 14D regimen of lansoprazole, bismuth subcitrate and antibiotic pairs, tetracycline–amoxicillin and tetracycline–metronidazole, is an effective quadruple therapy after one failed course of standard triple therapy.
144	Jheng et al. (2015) [156]	Failed 1st-line standard triple 7D (124)	RATM (61)	RBTM (63)	ITT: RATM, 90.2% vs. RBTM, 92.1% ($p = 0.71$) PP: RATM, 89.3% vs. RBTM, 93.3% ($p = 0.44$)	The 10D RATM treatment could be an alternative rescue therapy in bismuth-unavailable countries.
408	Jung et al. (2008) [182]	PUD, CAG, or CG, failed 1st-line standard triple (76)	LAP (31)	MTPB (45)	ITT: LAP, 51.6% vs. MTPB, 48.9% ($p = 0.815$) PP: LAP, 53.3% vs. MTPB, 62.9% ($p = 0.437$)	<i>Helicobacter pylori</i> eradication rates of levofloxacin-based triple therapy and bismuth-based quadruple therapy were not significantly different in second-line <i>H. pylori</i> eradication therapy, and low incidence of side effects was observed in levofloxacin-based triple therapy.
356	Lee et al. (2010) [172]	Failed 1st-line standard triple (227)	EBTM (112)	EBTM (115)	ITT: EBTM 7D, 64.3% vs. EBTM 14D, 82.6% ($p = 0.002$) PP: EBTM, 7D, 77.2% vs. EBTM 14D 93.6% ($p = 0.001$)	Two-week bismuth-containing quadruple therapy was more effective than the 1-week treatment.

Supplementary Table 9. Continued

No.	Study	No. of subjects	No. of intervention	No. of comparator	Results	Conclusion
305	Chung et al. (2011) [170]	Failed 1st-line standard triple (199)	PBMT (98)	PBMT (101)	ITT: PBMT 7D, 81.6% (95% CI, 73.9–89.3) vs. PBMT 14D, 85.1% (95% CI, 78.2–92.0) ($p = 0.028$) PP: PBMT 7D, 89.6% (95% CI, 83.2–96.0) vs. PBMT 14D, 96.2% (95% CI, 92.0–100.0) ($p = 0.015$)	Although PBMT7 was not inferior to PBMT14 statistically, PBMT could not demonstrate enough ITT/PP eradication rate.
979	Yoon et al. (2012) [164]	Failed 1st-line standard triple (169)	PBMT (85)	PBMT (84)	ITT: PBMT 7D, 83.5% vs. PBMT 14D, 87.7% ($p = 0.74$) PP: PBMT 7D, 87.7% vs. PBMT 14D, 88.9% ($p = 0.70$)	One-week bismuth-containing quadruple therapy can be as effective as a 2-week therapy after the failure of the first-line eradication therapy.
913	Moon et al. (2013) [161]	Failed 1st-line standard triple (113)	LML (56)	LBMT (57)	ITT: LML, 67.9% vs. LBMT, 84.2% ($p = 0.042$) PP: LML, 73.1% vs. LBMT, 92.3% ($p = 0.010$)	LML therapy is less effective than quadruple therapy as a second-line treatment for <i>H. pylori</i> infection.
1199	Karatapanis et al. (2009) [176]	Dyspepsia, failed 1st-line standard triple (76)	LAL (39)	LBMT (38)	ITT: LAL, 94.7% (95% CI, 83.0–99.4) vs. LBMT, 78.9% (95% CI, 62.7–90.4) ($p < 0.05$) PP: LAL, 97.3% (95% CI, 86.2–99.9) vs. LBMT, 85.7% (95% CI, 69.7–95.1) ($p > 0.05$)	A 10D course of levofloxacin triple therapy appeared to be more effective and better tolerated than a 10D bismuth-based quadruple therapy in the treatment of persistent <i>H. pylori</i> infection.
252	Kuo et al. (2013) [162]	Failed 1st-line standard triple (150)	EBTL (76)	EBTM (74)	ITT: EBTL, 78.9% (95% CI, 69.7–88.1) vs. EBTM, 79.7% (95% CI, 70.5–88.7) ($p > 0.05$) PP: EBTL, 87.0% (95% CI, 79.4–94.9) vs. EBTM, 90.8% (95% CI, 83.8–97.8) ($p > 0.05$)	The 10D bismuth quadruple therapies with high-dose metronidazole or levofloxacin were effective even in areas with high resistance.
6	Wu et al. (2017) [147]	Dyspepsia, failed 1st-line standard triple (73)	RBAL (38)	RAL (35)	ITT: RBAL, 80.0% vs. RAL, 60.5% mITT: RBAL, 84.8% (95% CI, 72.6–97.1) vs. RAL, 67.6% (95% CI, 51.9–83.4) ($p = 0.0987$) PP: RBAL, 84.4% (95% CI, 71.8–97.0) vs. RAL, 66.7% (95% CI, 50.6–82.8) ($p = 0.0975$)	Adding bismuth subcitrate to levofloxacin-based triple therapy was not more effective than not doing so.
85	Chuah et al. (2016) [152]	Failed 1st-line standard triple (164)	EALM (82)	EAL (82)	ITT: EALM, 90.2% (95% CI, 83.7–96.8) vs. EAL, 80.5% (95% CI, 71.7–89.2) ($p = 0.077$) PP: EALM, 91.4% (95% CI, 85.1–97.6) vs. EAL, 81.5% (95% CI, 72.8–90.1) ($p = 0.067$)	Levofloxacin and metronidazole-containing sequential therapy achieved a > 90% eradication rate as a second-line <i>H. pylori</i> therapy.

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280	Chuah et al. (2012) [166]	PUD or gastritis, failed 1st-line standard triple (128)	EAT (64)	EAL (64)	ITT: EAT, 75.0% vs. EAL, 78.1% ($p = 0.676$) PP: EAT, 80.0% vs. EAL, 80.3% ($p = 0.964$)	The efficacy of 14D EAT regimens attained an unacceptable report card of 75% eradication rates in intention-to-treat analysis and was not even superior to the 7D EAL regimen.
304	Hu et al. (2011) [168]	PUD, gastritis, or normal endoscopy finding, failed 1st-line standard triple (90)	EAM (45)	EAL (45)	ITT: EAM, 84.4% vs. EAL, 68.9% ($p = 0.134$) PP: EAM, 88.4% vs. EAL, 75.63% ($p = 0.160$)	The 14D EAM regimen was not inferior to the 7D EAL regimen for second-line anti- <i>H. pylori</i> therapy in Taiwan.

E, esomeprazole; A, amoxicillin; L, levofloxacin; B, bismuth; T, tetracycline; M, metronidazole; ITT, intention-to-treat; CI, confidence interval; PP, per protocol; R, rabeprazole; PUD, peptic ulcer disease; CAG, chronic atrophic gastritis; CG, chronic gastritis; P, proton pump inhibitor; mITT, modified ITT.